



SEQUENCE LISTING

(1)

GENERAL INFORMATION

- (i) APPLICANT: ELAZAR RABBANI
JANNIS G. STAVRIANOPOULOS
JAMES J. DONEGAN
DAKAI LIU
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- (ii) TITLE OF INVENTION: NOVEL PROPERTY EFFECTING
AND/OR PROPERTY EXHIBITING COMPOSITIONS FOR
THERAPEUTIC AND DIAGNOSTIC USE
- (iii) NUMBER OF SEQUENCES: 42
- (iv) CORRESPONDENCE ADDRESS:
 - (A) ADDRESSEE: ENZO THERAPEUTICS, INC.
 - (B) STREET: C/O ENZO BIOCHEM, INC.
527 MADISON AVENUE,
9TH FLOOR
NEW YORK
 - (C) CITY:
 - (D) STATE: NY
 - (E) COUNTRY: USA
 - (F) ZIP: 10022
- (v) COMPUTER READABLE FORM:
 - (A) MEDIUM TYPE: 3.5" Micro Floppy Disk. 1.44 KB
STORAGE
 - (B) COMPUTER: IBM PC/XT/AT, IBM PS/2 OR COMPATIBLES
 - (C) OPERATING SYSTEM: PC-DOS
 - (D) SOFTWARE: MICROSOFT WORD ___ - ASCII TEXT (DOS)
- (vi) CURRENT APPLICATION DATA:
 - (A) APPLICATION NUMBER: US 08/978,636
 - (B) FILING DATE: 25-NOVEMBER-1997
 - (C) CLASSIFICATION: Not Yet Known
- (viii) ATTORNEY/AGENT INFORMATION:
 - (A) NAME: FEDUS, RONALD C.
 - (B) REGISTRATION NUMBER: 32,567
 - (C) REFERENCE/DOCKET NUMBER: ENZ-53(D3)
- (ix) TELECOMMUNICATION INFORMATION:
 - (A) TELEPHONE: (212) 583-0100
 - (B) TELEFAX: (212) 583-0150

(2) INFORMATION FOR SEQ ID NO: 1

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 20 amino acids
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear

SEQ ID: PA

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

(ix) SEQUENCE DESCRIPTION: SEQ ID NO: 1:

Gly Phe Phe Gly Ala Ile Ala Gly Phe Leu Glu Gly Gly Trp Glu Gly
1 10 15

Met Ile Ala Gly
20

(3) INFORMATION FOR SEQ ID NO. 2:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(ix) SEQUENCE DESCRIPTION: SEQ ID NO: 2:

TGCTCTCTAA GGGTCTACTC
20

(4) INFORMATION FOR SEQ ID NO. 3:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 15 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(ix) SEQUENCE DESCRIPTION: SEQ ID NO: 3:

CTCTAAGGTA AATAT
15

(5) INFORMATION FOR SEQ ID NO. 4:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 16 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: DNA (genomic)
- (iii) HYPOTHETICAL: NO
- (ix) SEQUENCE DESCRIPTION: SEQ ID NO: 4:

TGTAATTTAG ATTCAA
16

(6) INFORMATION FOR SEQ ID NO. 5:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 19 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: DNA (genomic)
- (iii) HYPOTHETICAL: YES
- (ix) SEQUENCE DESCRIPTION: SEQ ID NO: 5:

TGCTCTCTAA GGTAATAT
19

(7) INFORMATION FOR SEQ ID NO. 6:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 19 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: DNA (genomic)
- (iii) HYPOTHETICAL: YES
- (ix) SEQUENCE DESCRIPTION: SEQ ID NO: 6:

IGTATTTTAG GGTCTACTC
19

(8) INFORMATION FOR SEQ ID NO. 7:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 19 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: mRNA

SEQ ID: PA

(iii) HYPOTHETICAL: YES

(ix) SEQUENCE DESCRIPTION: SEQ ID NO: 7:

UGCUCUCUAA GGUAAAUAU
19

(9) INFORMATION FOR SEQ ID NO. 8:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 19 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: mRNA

(iii) HYPOTHETICAL: YES

(ix) SEQUENCE DESCRIPTION: SEQ ID NO: 8:

UGUAUUUUAG GGUCUACUC
19

(10) INFORMATION FOR SEQ ID NO. 9:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: mRNA

(iii) HYPOTHETICAL: YES

(ix) SEQUENCE DESCRIPTION: SEQ ID NO: 9:

UGCUCUCUAA GGGUCUACUC
20

(11) INFORMATION FOR SEQ ID NO. 10:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 49 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: other nucleic acid
(A) Description: desc - "oligonucleotide"

(iii) HYPOTHETICAL: YES

(ix) SEQUENCE DESCRIPTION: SEQ ID NO: 10:

GGAATTCGTC TCGAGCTCTG ATCACCACCA TGGACACGAT TAACATCGC
49

(12) INFORMATION FOR SEQ ID NO. 11:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 55 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: other nucleic acid
(A) Description: 'desc = "oligonucleotide"
- (iii) HYPOTHETICAL: YES

(ix) SEQUENCE DESCRIPTION: SEQ ID NO: 11:

GACTAGTTGG TCTCGTCTCT TTTTGGAGG AGTGTCGTTC TTAGCGATGT TAATC
55

(13) INFORMATION FOR SEQ ID NO. 12:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 46 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: other nucleic acid
(A) Description: 'desc = "oligonucleotide"
- (iii) HYPOTHETICAL: YES

(ix) SEQUENCE DESCRIPTION: SEQ ID NO: 12:

GGAATTCGTC TCGGAGAAAG GTAAAATTCT CTGACATCGA ACTGGC
46

(14) INFORMATION FOR SEQ ID NO. 13:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 33 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: other nucleic acid
(A) Description: desc "oligonucleotide"

(iii) HYPOTHETICAL: YES

(ix) SEQUENCE DESCRIPTION: SEQ ID NO: 13:

GACTAGTGGT CTCCCCTTAG AGAGCATGTC AGC
33

(15) INFORMATION FOR SEQ ID NO. 14:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 33 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: other nucleic acid
(A) Description: /desc = "oligonucleotide"

(iii) HYPOTHETICAL: YES

(ix) SEQUENCE DESCRIPTION: SEQ ID NO: 14:

GGAATTCGGT CTCGGGTCTA CTCGGTGGCG AGG
33

(16) INFORMATION FOR SEQ ID NO. 15:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 27 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: other nucleic acid
(A) Description: /desc = "oligonucleotide"

(iii) HYPOTHETICAL: YES

(ix) SEQUENCE DESCRIPTION: SEQ ID NO: 15:

GACTAGTCGT TACGCGAACG CAAAGTC
27

(17) INFORMATION FOR SEQ ID NO. 16:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 36 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: other nucleic acid
(A) Description: desc = "oligonucleotide"

(iii) HYPOTHETICAL: YES

(ix) SEQUENCE DESCRIPTION: SEQ ID NO: 16:

GGAATTCGTC TCTAAGGTAA ATATAAAATT TTAAAG
36

(18) INFORMATION FOR SEQ ID NO 17:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 40 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: other nucleic acid
(A) Description: 'desc = "oligonucleotide"'

(iii) HYPOTHETICAL: YES

(ix) SEQUENCE DESCRIPTION: SEQ ID NO: 17:

GACTAGTCGT CTCTGACCCT AAAATACACA AACAATTAGA
40

(19) INFORMATION FOR SEQ ID NO. 18:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 92 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: YES

(ix) SEQUENCE DESCRIPTION: SEQ ID NO: 18:

GGAATTCGTC TCGAGCTCTG ATCACCACCA TGGACACGAT TAACATCGCT
AAGAACGACA 60

CTCCTCCAAA AAAGAGACGA GACCAACTAG TC
92

(20) INFORMATION FOR SEQ ID NO. 19:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 46 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: DNA (genomic)
- (iii) HYPOTHETICAL: YES
- (ix) SEQUENCE DESCRIPTION: SEQ ID NO: 19:

GGAATTCGTC TCGGAGAAAG GTAAAATTCT CTGACATCGA ACTGGC
46

(21) INFORMATION FOR SEQ ID NO. 20:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 106 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: DNA (genomic)
- (iii) HYPOTHETICAL: YES
- (ix) SEQUENCE DESCRIPTION: SEQ ID NO: 20:

GGAATTCGTC TCGAGCTCTG ATCACCACCA TGGACACGAT TAACATCGCT
AAGAACGACA 60

CTCCTCCAAA AAAGAGAAAG GTAAAATTCT CTGACATCGA ACTGGC
106

(22) INFORMATION FOR SEQ ID NO. 21:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 50 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: DNA (genomic)
- (iii) HYPOTHETICAL: NO
- (ix) SEQUENCE DESCRIPTION: SEQ ID NO: 21:

ATGGACACGA TTAACATCGC TAAGAACGAC TTCTCTGACA TCGAACGGC
50

(23) INFORMATION FOR SEQ ID NO. 22:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 77 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: YES

(ix) SEQUENCE DESCRIPTION: SEQ ID NO: 22:

ATGGACACGA TTAACATCGC TAAGAACGAC ACTCCTCCAA AAAAGAGAAA
GGTAAAAATC 60

TCTGACATCG AACTGGC
77

(24) INFORMATION FOR SEQ ID NO. 23:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 69 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: other nucleic acid
(A) Description: 'desc = "oligonucleotide"

(iii) HYPOTHETICAL: YES

(ix) SEQUENCE DESCRIPTION: SEQ ID NO: 23:

GATCATTAGA CCAGATCTGA GCCTGGGAGC TCTCTGGCTA ACTAGGGAAC
CCACTGCTTA 60

AGCCTCAAG
69

(25) INFORMATION FOR SEQ ID NO. 24:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 69 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: other nucleic acid
(A) Description: desc = "oligonucleotide"

(iii) HYPOTHETICAL: YES

(ix) SEQUENCE DESCRIPTION: SEQ ID NO: 24:

GATCCTTGAG GCTTAAGCAG TGGGTTCCT AGTTAGCCAG AGAGCTCCCA
GGCTCAGATC 60

TGGTCTAAT
69

(26) INFORMATION FOR SEQ ID NO. 25:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 61 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: other nucleic acid
 - (A) Description: desc = "oligonucleotide"
- (iii) HYPOTHETICAL: YES
- (ix) SEQUENCE DESCRIPTION: SEQ ID NO: 25:

GATCACCTTA GGCTCTCCTA TGGCAGGAAG AAGCGGAGAC AGCGACGAAG
ACCTCCTCAA 60

G

61

(27) INFORMATION FOR SEQ ID NO. 26:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 61 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: other nucleic acid
 - (A) Description: /desc = "oligonucleotide"
- (iii) HYPOTHETICAL: YES
- (ix) SEQUENCE DESCRIPTION: SEQ ID NO: 26:

GATCCTTGAG GAGGTCTTCG TCGCTGTCTC CGCTTCTTCC TGCCATAGGA
GAGCCTAAGG 60

T

61

(28) INFORMATION FOR SEQ ID NO. 27:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 62 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: other nucleic acid
 - (A) Description: desc = "oligonucleotide"

(iii) HYPOTHETICAL: YES

(ix) SEQUENCE DESCRIPTION: SEQ ID NO: 27:

GATCATAGTG AATAGAGTTA GGCAGGGATA CTCACCATTA TCGTTTCAGA
 CCCACCTCCC 60

AG

62

(29) INFORMATION FOR SEQ ID NO 28:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 62 base pairs
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: other nucleic acid
 (A) Description: desc = "oligonucleotide"

(iii) HYPOTHETICAL: YES

(ix) SEQUENCE DESCRIPTION: SEQ ID NO: 28:

GATCCTGGGA GGTGGGTCTG AAACGATAAT GGTGAGTATC CCTGCCTAAC
 TCTATTCAT 60

AT

62

(30) INFORMATION FOR SEQ ID NO. 29:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 30 base pairs
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: other nucleic acid
 (A) Description: desc = "oligonucleotide"

(iii) HYPOTHETICAL: YES

(iv) ORIGINAL SOURCE:
 (A) ORGANISM: TER-1

(x) SEQUENCE DESCRIPTION: SEQ ID NO: 29:

AATCTAGAGC TAACAAAGCC CGAAAGGAAG
 30

(31) INFORMATION FOR SEQ ID NO. 30:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 28 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: other nucleic acid
 - (A) Description desc = "oligonucleotide"
- (iii) HYPOTHETICAL: YES
- (ix) SEQUENCE DESCRIPTION: SEQ ID NO: 30:

TTCTGCAGAT ATAGTTCCTC CTTTCAGC
28

(32) INFORMATION FOR SEQ ID NO. 31:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 70 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: other nucleic acid
 - (A) Description: /desc = "oligonucleotide"
- (iii) HYPOTHETICAL: YES
- (ix) SEQUENCE DESCRIPTION: SEQ ID NO: 31:

TCGAGCCATG GCTTAAGGAT CCGTACGTCC GGAGCTAGCG GGCCCATCGA
TACTAGTTAA 60
ATGCAGATCT
70

(33) INFORMATION FOR SEQ ID NO. 32:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 70 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: other nucleic acid
 - (A) Description: -desc = "oligonucleotide"
- (iii) HYPOTHETICAL: YES
- (ix) SEQUENCE DESCRIPTION: SEQ ID NO: 32:

SEQ ID: PA

CTAGAGATCT GCATTAACT AGTATCGATG GGCCCCGCTAG CTCCGGACGT
ACGGATCCTT 60

AAGCCATGGC
70

(34) INFORMATION FOR SEQ ID NO. 33:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 29 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: other nucleic acid
(A) Description: 'desc = "oligonucleotide"
- (iii) HYPOTHETICAL: YES
- (ix) SEQUENCE DESCRIPTION: SEQ ID NO: 33:

CATGAAATTA ATTCGACTCA CTATACGGA
29

(35) INFORMATION FOR SEQ ID NO. 34:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 29 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: other nucleic acid
(A) Description: 'desc = "oligonucleotide"
- (iii) HYPOTHETICAL: YES
- (ix) SEQUENCE DESCRIPTION: SEQ ID NO: 34:

TTTAATTAAG CTGAGTGATA TGCCTCTAG
29

(36) INFORMATION FOR SEQ ID NO. 35:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 72 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: other nucleic acid
(A) Description: desc = "oligonucleotide"

SEQ ID: PA

(iii) HYPOTHETICAL: YES

(ix) SEQUENCE DESCRIPTION: SEQ ID NO: 35:

GATCCGGATT GAGGCTTAAG CAGTGGGTTC CCTAGTTAGC CAGAGAGCTC
CCAGGCTCAG 60

ATCTGGTCTA AT
72

(37) INFORMATION FOR SEQ ID NO. 36:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 72 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: other nucleic acid
(A) Description: /desc = "oligonucleotide"

(iii) HYPOTHETICAL: YES

(ix) SEQUENCE DESCRIPTION: SEQ ID NO: 36:

CCGGATTAGA CCAGATCTGA GCCTGGGAGC TCTCTGGCTA ACTAGGGAAC
CCACTGCTTA 60

AGCCTCAATC CG
72

(38) INFORMATION FOR SEQ ID NO. 37:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 66 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: other nucleic acid
(A) Description: /desc = "oligonucleotide"

(iii) HYPOTHETICAL: YES

(ix) SEQUENCE DESCRIPTION: SEQ ID NO: 37:

GATCCGGACC TTGAGGAGGT CTCGTCGCT GTCTCCGCTT CTCCTGCCA
TAGGAGAGCC 60

TAAGGT
66

(39) INFORMATION FOR SEQ ID NO. 38:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 66 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: other nucleic acid
(A) Description: /desc = "oligonucleotide"
- (iii) HYPOTHETICAL: YES
- (ix) SEQUENCE DESCRIPTION: SEQ ID NO: 38:

CCGGACCTTA GGCTCTCCTA TGGCAGGAAG AAGCGGAGAC AGCGACGAAG
ACCTCCTCAA 60

GGTCCG
66

(40) INFORMATION FOR SEQ ID NO. 39:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 65 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: other nucleic acid
(A) Description: /desc = "oligonucleotide"
- (iii) HYPOTHETICAL: YES
- (ix) SEQUENCE DESCRIPTION: SEQ ID NO: 39:

GATCCGGATG GGAGGTGGGT CTGAAACGAT AATGGTGAGT ATCCCTGCCT
AACTCTATTC 60

ACTAT
65

(41) INFORMATION FOR SEQ ID NO. 40:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 65 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: other nucleic acid
(A) Description: /desc = "oligonucleotide"
- (iii) HYPOTHETICAL: YES

(ix) SEQUENCE DESCRIPTION: SEQ ID NO: 40:

CCGGATAGTG AATAGAGTTA GGCAGGGATA CTCACCATTA TCGTTTCAGA
CCCACCTCCC 60

ATCCG
65

(42) INFORMATION FOR SEQ ID NO 41:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 67 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: other nucleic acid
(A) Description: desc = "oligonucleotide"

- (iii) HYPOTHETICAL: YES

(ix) SEQUENCE DESCRIPTION: SEQ ID NO: 41:

GATCAGCATG CCTGCAGGTC GACTCTAGAC CCGGGTACCG AGCTCGCCCT
ATAGTGAGTC 60

GTATTAT
67

(43) INFORMATION FOR SEQ ID NO. 42:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 67 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: other nucleic acid
(A) Description: desc = "oligonucleotide"

- (iii) HYPOTHETICAL: YES

(ix) SEQUENCE DESCRIPTION: SEQ ID NO: 42:

CCGGATAATA CGACTCACTA TAGGGCGAGC TCGGTACCCG GGTCTAGAGT
CGACCTGCAG 60

GCATGCT
67